UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,622	11/02/2000	Robert E. Coyne	2685/5675	2794

7590 09/09/2004	**EXAMINER**
At & T Corp	PIERRE, MYRIAM
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	ART UNIT / **PAPER NUMBER**
Middletown, NJ 07748	2654

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)	
Office Action Summary	09/703,622	COYNE ET AL.	
	Examiner	**Art Unit**	
	Myriam Pierre	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-37* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-37* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *02 November 2000* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/2/2000*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1.   Claims 1, 5-11, 15-20 are rejected under 35 U.S.C. 102 (b) as being anticipated by Badler et al. (Workshop on embodied conversational characters 98).

As to claims 1 and 11, Badler teaches

performing a linguistic analysis on the set of words to generate a structure

representative of the semantic relations of the set of words **(Linguistic**

representation structure with phrases (set of words), "core

semantics", page 2, left col., paragraph 2 and Fig 1);

converting structure to a set of description elements, description elements are

representative of objects to be depicted in a scene and relationships

between objects **(Structure, modifying described events/description**

elements and the action (also a descriptive element) such as "slide

(John, box)", John is the participant/agent/Avatar or depictor and

box is the object page 2, left col., paragraph 2);

assigning a set of depictors to each description element **(Participants**

such as agents have an 'object' field, which has a descriptive

element called 'OBJECT list', Fig 1 page 3 and page 2, right col.,

paragraph 3);

depictors comprise:

a reference to an object to be modified **(Avatars are**

controlled/modified via instructions, for example, slide(John, box),

box is the object to be modified by sliding it, page 1, right col.,

paragraph 3);

parameters used in modifying the object **(Parameters are used to**

control/modify via instructions, use slots to include spatial

information, for example "(to the store, across the room)" page 1,

right col., paragraph 3 and page 2 left col., paragraph 2);

a procedure for the modification of the object **("Preparatory Specification" is a**

list of <condition, action> that is a procedure to control or execute a

condition/object, page 3, right col., paragraph 1); and

generating scene description by execution of procedures for the modification of

the objects **(Evaluate condition to be either TRUE or FALSE**

(execution of procedure) then a corresponding action is executed,

"Execution Steps" are used to describe a complete action, which is

done only after all conditions have been satisfied, page 3, right col.,

paragraph 1).

As to claims 5 and 15, Badler teaches,

each description element is classified as belonging to a description element

type (**"Syntactic representation of PAR" (parameterized action**

representation) uses description elements such as OBJECT or

BOOLEAN, in it's core semantics description, page 3, Fig 1).

As to claims 6 and 16, Badler teaches,

the description element type has an object to which the description element

refers **(Uses OBJECT that are within PAR as an element to describe**

physical objects, page 2, right col., paragraph 4 and Fig 1).

As to claims 7 and 17, Badler teaches,

at least one description element is modified to resolve conflicts between

description elements **(PAR differentiates between change of location**

description and idiomatic expressions, cultural habits, in a

descriptive element (such as OBJECT), page 2, left col., paragraph 3

and Fig 1).

As to claims 8 and 18, Badler teaches,

at least one description element is modified to add constraints to description

elements **(Uses "core semantics" in Syntactic Representation of PAR,**

elements in each description, such as Motion, Force, and Length are

OBJECT and BOOLEAN which modifies/changes the condition of the Avatar, page 3, Fig 1).

As to claims 9 and 19, Badler teaches,

at least one depictor is modified to resolve conflicts between depictors **(An agent is controlled by it's own process yet, there are rules that depend on the position of objects used by the waiter, these rules resolve conflicts between Avatars, such as if one is standing or sitting, each position is given a specific rule, see example, page 5, col. 2, paragraph 2).**

As to claims 10 and 20, Badler teaches,

at least one depictor is modified to add constraints to depictors **(Slots are used to give information such as path "(to the store, across the room)", and adverbs are used to add conditions, such as "(quickly, carefully)", page 2, col. 2, paragraph 3).**

2.   Claim 21, 29, and 37 is rejected under 35 U.S.C. 102 (b) as being

anticipated by Joshi et al. (Coling 94).

As to claims 21 and 29 Joshi teaches

tagging the set of words with parts of speech **(parts of speech taggers by**

disambiguation technique, page 154, left col., paragraph 2);

parsing tagged set of words into a parse tree structure representative of the

structure of the set of words **(part of speech taggers by disambiguation**

technique, page 154, left col., paragraph 2, and Fig 2a);

converting parse tree into a structure representative of semantic relations of the

set of words **(phrase (or sets of words) tree specifies syntactic and**

semantic constraints, page 155, left col., paragraph 2 and Fig 2a);

converting structure into a high-level scene description, high-level scene

description includes at least one description element **(Uses natural**

language to convey conditional actions that are in the Avatar's

memory, thus, there is at least one description element for the entire

scene, for example, when giving an instruction to the Avatar, it will

know to the other conditions that has to be done to complete the

scene or instruction, such as "if you agree to go for a walk with

someone then follow them", page 2, right col., paragraph 2); and

generating low-level scene description by execution of said procedures for the

modification of the objects **(Low level scene example, "to the store,**

across the room" and the manner information, which modifies the

object, such as 'quickly, carefully', page 2, left col., paragraph 2).

As to claims 37, Joshi teaches,

performing a linguistic analysis on the set of words to generate a structure

representative of semantic relations of the set of words (**Linguistic**

representation structure with phrases (set of words), "core

semantics", page 2, left col., paragraph 2 and Fig 1);

converting structure to a set of description elements, description elements are

representative of objects to be depicted to each description element in set

of description elements (**Structure from phrases, modifying described**

events, and enriches "action description", page 2, left col.,

paragraph 2); and

generating scene description by solving set of constraints for set of description

elements (**"Execution Steps" used to describe a complete action,**

which is done only after all conditions have been satisfied, page 3,

right col., paragraph 1).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described
as set forth in section 102 of this title, if the differences between the subject matter sought to
be patented and the prior art are such that the subject matter as a whole would have been
obvious at the time the invention was made to a person having ordinary skill in the art to which
said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

2.   Claims 2-4 and 12-14, are rejected under 35 U.S.C. 103(a) as being

unpatentable over Badler et al. (Workshop on embodied conversational

characters 98) in view of Joshi et al. (Coling 94).

        As to claim 2 and 12, Badler teaches using natural language/linguistic

analysis and an Avatar that takes instructions from natural language **(page 1, left**

col., paragraph 1).

        Badler does not teach of using tags for sets of words with grammatical

parts.

        However, Joshi teaches linguistic analysis includes tagging the set of

words with grammatical parts of speech **(part of speech tagging, page 154,**

paragraph 1).

        It would have been obvious to one of ordinary skill in the art at the time the

invention was made to tag words/phrases into grammatical parts of speech in

Badler's linguistic language control system for the purpose of parsing sentences

to eliminate or reduce unambiguous words/phrases on a computer. One skilled

in the art would have been motivated to incorporate tag words/phrases to

develop a linguistically controlled system.

        As to claim 3 and 13, Badler teaches using natural language/linguistics

(page 2, left col. paragraph 2) and an Avatar that takes instructions from

natural language (page 1, left col., paragraph 1).

        Badler does not teach of using parse tree structures.

However, Joshi teaches linguistic analysis includes parsing the set of words into a parse tree structure representative of the structure of the set of words **(parses tree-adjoining grammar, phrases are a set of words, page 154, left col. paragraph 3).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Joshi's parsing phrases/sets of words into parse tree structures and Badler's linguistic language controlled system for the purpose of parsing sentences to eliminate or reduce unambiguous words/phrases on a computer. One skilled in the art would have been motivated to incorporate parsed tree phrases to develop a linguistically controlled system.

As to claims 4 and 14, Badler teaches using structure representation of using semantic relationships (page 2, left col., paragraph 2) and an Avatar that takes instructions from natural language (page 1, left col., paragraph 1).

Badler does not teach of using dependency trees from set of words or phrases.

However, Joshi teaches structure representative of the semantic relations of the set of words is a dependency structure, the dependency structure indicates words that a given word is dependent on and indicates the words that depend on the given word **("Structures of LTAG", LTAG is 'lexical tag adjoining grammar', which has sets of words that are in a dependency tree structure, each word is dependent on the given word, Fig 2a and Fig 2c and Table 3).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Joshi's structured representation of a semantic relationship of phrases in a dependency structure and use Badler's Smart Avatar for the purpose of using a high-level scene description on a computer. One skilled in the art would have been motivated to use linguistic techniques into a 3D interactive system.

3.   Claims 22-28 and 30-36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi et al. (Coling 94) in view of Badler et al. (Workshop on embodied conversational characters 98).

As to claims 22 and 30 Joshi teaches structure representative of the semantic relations of the set of words is a dependency structure, the dependency structure indicates words that a given word is dependent on and indicates the words that depend on the given word (**"Structures of LTAG", LTAG is 'lexical tag adjoining grammar', which has sets of words that are in a dependency tree structure, each word is dependent on the given word, Fig 2a and Fig 2c and Table 3**).

Joshi does not teach of using a scene, such as an Avatar, that is controlled by natural language.

Badler teaches using structure representation of using semantic relationships (page 2, left col., paragraph 2) and an Avatar that takes instructions from natural language (page 1, left col., paragraph 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Joshi's structured representation of a semantic relationship of phrases in a dependency structure and use Badler's Smart Avatar for the purpose of creating a high-level scene description on a computer. One skilled in the art would have been motivated to use linguistic techniques into a 3D interactive system.

As to claims 23 and 31 Joshi does not teach, each description element is classified as belonging to a description element type.

However, Badler teaches of **"Syntactic representation of PAR" (parameterized action representation), which uses description elements such as OBJECT or BOOLEAN, in it's core semantics description (page 3, Fig 1).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Badler's description element classification for the purpose of organizing the instructions given to the Avatar to perform a scene. One skilled in the art would have been motivated to use a scene description that has element descriptions that are classified for easy updating.

As to claims 24 and 32 Joshi does not teach, the description element type has an object to which the description element refers.

However, Badler teaches the element **'OBJECT' is within PAR as an element to describe physical objects (page 2, right col., paragraph 4 and Fig 1).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Badler's description element type as a pointer to which description element is being referred. One skilled in the art would have been motivated to use a scene description that has element descriptions which has a pointer that refers to the description element to easily find the location of the description element.

As to claims 25 and 33, Joshi does not teach, at least one description element is modified to resolve conflicts between description elements.

Badler teaches that the **PAR differentiates between change of location description and idiomatic expressions, cultural habits, in a descriptive element (such as OBJECT) (page 2, left col., paragraph 3 and Fig 1).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Badler's modified description element to resolve conflicts in scenes. One skilled in the art would have been motivated to use a conflict resolution in the scene description to avoid errors in the given instructions.

As to claims 26 and 34, Joshi does not teach at least one description element is modified to add constraints to description elements.

Badler teaches of **"core semantics" in Syntactic Representation of PAR, elements in each description, such as Motion, Force, and Length are**

OBJECT and BOOLEAN which modifies/changes the condition of the

Avatar (page 3, Fig 1).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to use Badler's description element type, which has added

constraints. One skilled in the art would have been motivated to use an added

constraint to a description element for controlling the scene/3D image.

As to claims 27, and 35, Joshi does not teach at least one depictor is

modified to resolve conflicts between depictors.

Badler teaches of an **agent which is controlled by it's own process**

yet, there are rules that depend on the position of objects used by the

waiter, these rules resolve conflicts between Avatars, such as if one is

standing or sitting, each position is given a specific rule (see example,

page 5, col. 2, paragraph 2).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to use Badler's Avatar depictor that is modified to resolve

conflicts between depictors. One skilled in the art would have been motivated to

modify or change constraints that solve conflicts between depictors to avoid

programming errors in the scene description.

As to claims 28, and 36, Joshi does not teach at least one depictor is

modified to add constraints to depictors.

Badler teaches of **slots that are used to give information such as path**

"(to the store, across the room)"   , and adverbs are used to add

conditions, such as "(quickly, carefully)" (page 2, col. 2, paragraph 3).

It would have been obvious to one of ordinary skill in the art at the

time the invention was made to use Badler's Avatar depictor in which added

constraints are used to modify depictors. One skilled in the art would have been

motivated to add constraints to the depictors to avoid programming errors in the

scene description.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure as follows:

DeWitt et al. (6,535,215) teaches character animation that is translated from

high-level commands, depicts motions and character model.

Merrill et al. (6,181,351) teaches animation thru spoken command and text.

5.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Myriam Pierre whose telephone number is

703-605-1196. The examiner can normally be reached on Monday – Friday from

5:30 a.m. - 2:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Smits can be reached on 703-306-3011. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information As to the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MP

09/01/04

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER